

**161.969**

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### COMPLETE SPECIFICATION

## Inhalant

I, JOHANNES REICHERT, of  
Wien, in the Free State of Saxony,  
Germany, of German nationality, do  
hereby declare the nature of the inven-  
tion and in what manner the same is  
to be performed, to be particularly described  
and substantiated in and by the following  
substance:—

The drawing illustrates the invention  
in two forms of construction.

Fig. 1 is a vertical section  
of the apparatus with a dip bell as air com-  
pressor.

Fig. 2 shows in vertical section  
the apparatus with a water jet blower built  
in moving as air compressor.

This invention relates to an inhaler 10 with an air compressor which consists of two chambers through which the fresh air flows under pressure, one of said chambers being connected to form a 15 chamber for the production of a cold spray suitable for the production of hot moist air, the other chamber being constructed to form a cooling or refrigerating device for the production of cold dry air and also 20 suitable for the alternate inhalation of cold air, and that of hot air.

A compressor 11 for water heated in a convenient manner and an inverted cylinder 2 mounted in the same shaft of the steam chamber 1. An auxiliary 25 projecting pipe 3 with a projecting dip bell 4 dipping into said auxiliary receptacle 2 forms together the outer which is separated from the heated 30 receptacle by an insulating partition 5.

The compressed air produced in a 35

and air and the flow of air, according to the present invention, the subdivider is composed of two parts, one of them is a cylindrical shell, the other is a cylindrical channel, the latter one comprising a bell which dips into said annular recess, the cylindrical channel being provided with a flange at one end of the annular recess and the walls of these two parts continue a very small distance beyond the annular recess, so that, if needed is forced, whilst the city bell continues a space below the two parts in a space which will be identified between the supply pipes 10 into the distributing rings 11 and from there on the walls of the distributing rings 12 into the space between the walls of the two cooling receptacles, the inner of which is provided with a guide for the water in the entry by means of guide ring 7, so the tubular screw 17 into the aspirating pipes for cold dried air and the tubular screw 18 for hot steam and to the tubular screw 13 for the hot steam air.

which the compressed air is collected. 35 In this manner it is possible to ensure, that the air to be inhaled is sufficiently cooled to a low temperature although it has only a short travel to make through the apparatus and is exposed to the cool-

The cooling receptacles are filled with ice or with water of such a temperature 40 which is required for the individual demand. A horizontal sieve 9 at the lower edge of the dry bell can be used for this purpose in order to keep the ice frag-

The invention further consists in providing means for producing the compressed air in a simple manner so that the apparatus can be used by any skilled person.

[Firm M.]

The drawing illustrates the invention in two forms of construction.

Fig. 1 shows in vertical section the apparatus with a dip ball as air compressor.

Fig. 2 shows in vertical section the apparatus with a water jet blower built in serving as air consumer.

A receptacle 1 for water heated in a conventional manner and an inverted cylinder 2 inserted in the same duct of the steam chamber 3. An annular receptacle 4 and a second receptacle 5 with a projecting lip 6 slide together the outer which is separated from the heated receptacle by an insulating partition 4. Any other separated arrangement of the two chambers may be chosen.

The compressed air produced in a  
manometer which will be described hereafter  
flows from the supply pipe 10 into the dis-  
tributing tube 11 and from there on the  
one hand under the bell 8 and further  
into the space between the walls of the  
two cooling receptacles, the inner of  
these two receptacles being tightly  
guided in the center by means of guide  
rings 7, to the tubular socket 12 into the  
exhausting pipe for cold dried air and on  
the other hand into the steam chamber  
3 and to the tubular socket 13 for hot

The cooling receptacles are filled with ice or with water of such a temperature which is required for the individual demand. A horizontal sieve 9 at the lower edge of the dry ball can be used for this purpose in order to keep the ice fragments down when a specially cold temperature is required. A very dry air of moderate temperature can be further produced if the former receptacle is filled with a solid producing mixture the outer receptacle being filled with water. Any

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graduation can be obtained as regards degree of cut or dryness. For the heating chamber the regulation by heating is sufficient.

6 Each aspiration pipe has a removable separator (5) for the reception of spectrum or of the water of condensation and further a thermometer. The aspiration

10 pipes are connected by means of rubber  
tubes and when not in use they are stored  
in a holder 19 so that the rubber tube is  
squeezed. Instead of one aspirating  
socket several such sockets can be pro-  
vided so that several patients can use one  
13 apparatus.

The descriptions given relate to both forms of construction. For the production of air under pressure, which could be effected for  $m = 1$  in any convenient manner, a dip bell 22 is provided according to Fig. 1, which is tightly guided in a receptacle 21 and which is adapted to take up in an upper space 23 water having a pressure of  $m$  atmospheres. The bell being constructed to form a refrigerating device characterized in that for the production of the cold dry air a refrigeration of cylindrical shape is provided which has a bell at its upper end dipping into the surface of a second liquid, the liquid being like an ordinary water, the compressed air being delivered under said dip-bell.

last in order to regulate the pressure  
25 accurately. To be filled the bell is lifted  
whereby the flap valve 24 is opened. The  
compressed air flows through a flexible  
tube 25 to the suction and pressure nozzle  
26 of the above mentioned supply tube  
30 19 so that a multiple of the filling of  
the nozzle is possible.

23 dip bell is inserted into the apparatus so that the dip bell can be built as a pressure of high pressure, a corresponding amount of spore being served. It is particularly of such that the time prescribed for the incubation so that the aspiration tube have to be changed each time when the bell is raised.

48 According to Fig. 3 the inner cooling receptacle is constructed so that it moves at the same time as a water jet injector from which the air jet is led through con-

4. nozzle 20 as used according to Fig. 1, now however mounted with the supply pipe 10 in the dip bell 8 and function like

60 pipe 11 in the dip seat of mine having the air within the space confined by the mid dip bell and the water level in the sump- lar receptacle 5 so well as in the chamber 3. In the top part of the dip bell 8

9. Inhaber as claimed in Claims 4 and 5 characterized by a tube for the water- and air jet extending vertically deeply into the collecting space for compressed

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ber 4. In the top part of the dip cell 5 a water receptacle is arranged which serves as ballast to keep the receptacle 6 at the lowest position shown in Fig. 2. 35 water from the water tank flows into the connecting space 7 and the air is expelled through the air vent 8. The air vent terminates above a protecting plate and by an overflow tube under the protecting plate for the outflow of the water.

56 The water from the water main flows through the nozzle 23 in a sharp jet through the central pipe 27, drawing along the outer air through the openings 25.

23 into the cylinder 8 and escaping  
80 through the exhaust tube 30, from  
which it may be drawn off by a rubber

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